
APPENDIX D



Remedial Action Plan

South Battery Park City Resiliency Project

Draft Remedial Action Plan

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Quality information

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Figure 1 – Site Plan

1 Introduction

This Remedial Action Plan has been prepared by AECOM for the Battery Park City Authority (BPCA) to provide environmental support for the planned construction activities associated with the South Battery Park City Resiliency (SBPCR) Project. The SBPCR Project would provide flood protection for portions of Battery Park City including Wagner Park, Pier A Plaza and The Battery. The flood alignment is composed of multiple different integrated features such as flip-up deployable gates (flip-up deployables), glass-topped floodwalls, buried floodwalls underneath terraced slopes, exposed floodwalls, and bermed floodwalls. The term “flood alignment” is used to differentiate the combination of flood control measures represented by the SBPCR Project from a traditional freestanding flood wall for risk reduction. In addition, interior drainage improvements are proposed for the SBPCR Project, including the isolation of the existing underground sewer manholes and connected chambers.

To meet projected design flood elevations (DFE)s for coastal surge, Wagner Park would be elevated 10 to 12 feet, and the buried floodwall would be constructed beneath the raised park, maximizing the amount of protected open space within the park, while maintaining views to the waterfront. The buried floodwall also allows users to fully occupy the lawn, garden, and public park, in contrast to a traditional floodwall design which would bisect the space. Additionally, an existing Wagner Park Pavilion Building will be demolished and a new one constructed. The location of the proposed Pavilion (the Pavilion) would be similar to the existing structure, but with a slightly smaller footprint and elevated approximately 10 to 12 feet above ground level and set back closer to Battery Place. The new Pavilion would have three (3) levels: a ground, first and second level.

1.1 Project Location and Current Use

The Project Area covers multiple properties from 1st place and the Museum of Jewish Heritage, through Robert F. Wagner Park across Pier A Plaza, and then along the north side of the Battery Bikeway in the Battery to higher ground near the intersection of State Street and Battery Place (Figure 1).

The purpose of the project is to reduce the flood risk within the Project Area and protect against a 100-year flood, inclusive of increased intensity and frequency of rainfall, coastal surge, and predicted sea level rise. increased storm intensity associated with climate change. It is one of three (3) resiliency projects being undertaken by BPCA to address flood risk reduction throughout Battery Park City’s ninety-two (92) acres. The other two projects are the Battery Park City Ball Fields and Community Center Resiliency Project, and the North/West BPC Resiliency Project. The SBPCR Project is also being designed with adaptability for the 2050 100-year storm event at such time as the North/West BPC Resiliency Project is completed and a tie-in between the two (2) projects is created

The SBPCR Project’s primary goal is risk reduction in the southern extremes of Battery Park City. This would be accomplished through implementation of integrated flood risk measures, while meeting the design criteria for a 100-year storm event, inclusive of increased intensity and frequency of rainfall, coastal surge and predicted sea level rise.

1.2 Site Geology and Hydrology

Based on observations made during the environmental boring program, soils to a depth of 30 feet below ground surface (bgs) generally consisted of brown fine sand with some silt, and trace gravel. Several borings exhibited poor sample recovery which was attributed to varying intervals of boulders and cobbles. Groundwater was generally observed between 9 and 11 feet bgs.

Based on information gathered during the geotechnical investigation (Oweis Engineering Inc., August 2021), fill materials were observed to depths between 15 and 19 feet bgs, other boring observations indicated fill materials may be present as deep as 38ft bgs, organic silts and clays were observed from the bottom of the fill material to the top of bedrock which was observed at depths ranging between 50 and 55 feet bgs. A copy of the geotechnical investigation is attached to this report in Appendix A.

1.3 Proposed Construction Plan

The proposed construction plan includes building demolition, building construction, excavation of material for construction of above and below grade floodwalls and gates, and elevating Wagner Park to allow its use to continue as open space (park land).

2 Prior Investigations

2.1 Phase I Environmental Site Assessment (ESA) (AECOM, September 2019)

AECOM performed a Phase I ESA of the subject property in accordance with the scope and limitations of ASTM Standard Practice Designation E 1527-13 for ESAs. The subject property is an irregularly shaped parcel located in a predominately residential and commercial neighborhood in the Battery Park section of Manhattan. The subject property is located to the south and west of Battery Place and approximately 200 feet southwest of the intersection of Battery Place and 2nd Place. According to the New York City Department of Finance (DOF), the subject property is designated as Block 16, Lot 10 (18 1st Place), and portions of Block 16, Lot 3 (401 South End Avenue) and Block 3, Lot 1 (10 Battery Park).

The Phase I covered the entire Project Area with the exception of locations along West Street between Battery Place and Albany Street. A change in the design following completion of the Phase I in 2019 now incorporates into the Project Area three existing subsurface regulator stations and four interceptor manholes to be part of the Near Surface Isolation (NSI) system. This system will aid in management of coastal storm surge. The NSI system generally consists of the installation of a gate within three existing regulator structures, and the retrofitting of four interceptor manholes.

Potential contamination sources from properties/locations within 1-mile of the Project Area were evaluated via a database search during the Phase I. Although the NSI retrofitting activities are not expected to involve excavation of, or generate potential exposure to, potentially contaminated materials outside of the structures themselves, to the extent required, any ground-intrusive work associated with upgrades to the NSI system will be done in accordance with the provisions of this RAP.

In preparation of the Phase I ESA, a site visit was conducted on June 14, 2019, which consisted of a visual inspection of the open space, pedestrian walkways, bike paths, and three buildings within the subject property. Two of the buildings are associated with the Museum of Jewish Heritage and the third building is the Wagner Park Pavilion. No visual evidence of underground storage tanks (e.g., vent pipes, fill ports), potable water wells, monitoring wells, clarifiers, dry wells, septic tanks, or leach fields was observed during the site visit. Gasoline service stations and dry cleaners were not observed in the immediate vicinity (approximately 500 feet) of the subject property. Other off-site sources of concern were not identified in the immediate vicinity.

The subject property, under the address Battery Park Pier and Pier A North River at The Battery, was identified on New York Spills (NY Spill) and the New York Aboveground Storage Tank (NY AST) databases. The NY Spills database indicates that there was evidence of apparent dumping of raw sewage into the Hudson River. The spill was closed in 1987. The NY Spills database also identified a discharge of oil from a street cleaning machine in 1996. This spill, which was identified as being 75 feet long by 2 feet wide, was closed in 2003. A former 2,500-gallon diesel fuel tank had been located on or near Pier A in 1962. The AST was removed in 2009. These database listings are not considered a recognized environmental condition (REC) with respect to the subject property.

A number of surrounding sites were identified in the environmental database search report. However, the majority of these sites were listed on non-contamination-related databases. Based on AECOM's review and analysis of the database listings, none of the surrounding sites would present a REC to the subject property, based on their distance (generally greater than 500 feet), regulatory status (i.e., regulatory closure, no violations found), media impacted (soil only), and/or topographical position relative to the subject property (i.e., down-gradient or cross-gradient).

The following REC was identified during the Phase I ESA:

- Due to the use of fill material from unidentified off-site sources during the construction of the subject property, the possibility exists for subsurface contamination on and in the immediate vicinity of subject property to be present.

Based on the above-described activities, no controlled RECs (CRECs) or historical RECs (HRECs) were identified in connection with the subject property. The following de minimis condition (DMC) was identified:

- Hydraulic fluid was observed to be leaking from an elevator motor located in the basement of the museum. The leak/stain was approximately two to three square feet and was observed to be on an intact concrete surface. Based on the limited extent, this leak/staining is considered a DMC.

2.2 Phase II Limited Site Investigation Report (AECOM, March 2022)

The Limited Phase II was performed based in part on the findings of the Phase I ESA (AECOM, September 2019). Activities included in the Phase II included:

- Underground utility clearance;
- Collection of environmental soil samples from seven of eleven borings advanced during the geotechnical drilling program; and
- Collection of grab groundwater samples from four of the geotechnical boring locations.

The results of the investigation indicated the following:

Soil analytical results were compared to the NYSDEC Part 375 unrestricted, residential, and commercial use SCOs. The results indicated that most exceedances of residential and commercial SCOs were limited to PAHs and metals consistent with the presence of historic or urban fill. Based on information gathered during site history research, this waterfront land was filled to create the subject property. One residential exceedance for the pesticide dieldrin was detected in the surficial soil sample at B-9 can be attributed to the use of pesticides. Other UU SCO pesticide exceedances were detected in the surficial soil samples with the exception of the duplicate sample at one location B-4 (18'20'). Pesticides were not detected in the parent sample suggesting cross contamination of the duplicate sample.

Ground water analytical results were compared to NYSDEC's Part 703 GQS (class GA) and/or the NYSDEC AWQSGV. The results indicated chloroform, hexachlorobutadiene, PAH compounds, PCBs, aluminum, and iron were detected above the AWQSGV. The presence of these compounds along with elevated detection limits on multiple analyses suggests that these exceedances are attributable to the elevated turbidity of the samples. Groundwater samples collected through temporary well points often have higher amounts of sediment which have a direct impact on the ability to analyze the sample. The groundwater results are not indicative of an environmental release that is impacting groundwater.

The soils and ground water appear to be non-hazardous contaminated material. Waste classification soil sampling also indicated that the contamination in soil is not hazardous as defined by the Resource Conservation and Recovery Act (RCRA). Since hazardous materials impacts have been identified, this Remedial Action Plan (RAP) has been developed to prevent exposure to such hazardous materials during construction activities.

Copies of the Phase I ESA and Phase II Limited Site Investigation are attached to this report in Appendix A.

3 Description of Construction Measures

The Limited Phase II Site Investigation indicated the presence of contamination in subsurface soil and groundwater above regulatory guidelines. The contaminants identified were primarily related to the historic/urban fill beneath the surface. The contaminants were detected at depths below grade that will be encountered during the construction of the Proposed Project.

The remedial and mitigation measures described in this section will be performed in accordance with all local, state, and federal laws. A site-specific Construction Health and Safety Plan (CHASP) has been prepared and will be implemented during construction for the purposes of protecting human health and/or the environment. The CHASP has been attached to this report in Appendix B.

Proposed construction measures in this Project include:

- During construction activities, all excavated material can be reused on-site if it meets the requirements of NYSDEC Part 360-13 regulations.
- If excavated material does not meet the requirements for reuse on-site and requires off-site disposal, sampling and analysis of the material as required by NYSDEC and the disposal facilities must be conducted;
- If excavated material is encountered that displays visual or olfactory indications of contamination, it must be appropriately segregated on-site;
- Import of materials to be used for excavation backfill or embankment will be performed in compliance with this plan and in accordance with all local, state, and federal laws. Imported material will be tested at the source facility and analytical data made available for review prior to the material being imported to the site;
- Stormwater pollution prevention measures must be implemented in accordance with all local, state, and federal laws;
- If underground storage tanks (USTs) are encountered (including any piping or apparatuses), it will be removed/closed in accordance with all applicable New York City and/or New York State Department of Environmental Conservation (NYSDEC) regulations;
- Management of any subsurface fluids (groundwater), if generated, in accordance with this plan and all local, state, or federal regulations;
- Management, removal and/or disposal of any hazardous building materials, including but not limited to, asbestos containing material (ACM), lead painted surfaces, or PCB containing materials in accordance with all local, state, or federal regulations.

3.1 Soil Excavations, Stockpiling, and Disposal

Soil excavations are proposed to allow for portions of the flood barrier that will be constructed below grade and for demolition of the existing Wagner Park Pavilion. It is currently estimated that a total of 34,288 cubic yards of soil and other demolition debris will be generated for disposal during construction. Since subsurface material is known to be contaminated, primarily from historic/urban fill, any material to be reused on-site must be reused in accordance with the provisions of 6 NYCRR Part 360.13 *Special requirements for pre-determined beneficial use of fill material*.

Should temporary stockpiling of excavated material be required, best management practices should be employed to assure that any contaminated material does not spread around the site from wind or precipitation events. All stockpiles will be placed on poly sheeting and covered with sheeting if left in place overnight. If stockpiles require longer staging on-site, additional controls including silt fencing may be necessary. The person or entity tasked with maintaining compliance with the RAP/CHASP will make the determination as to whether additional controls are necessary.

3.2 Off-Site Materials Transport

All material transported off-site will comply with this plan and all applicable local, state, and federal laws. Certain contaminated materials may have specific transportation requirements including but not limited to, covering the material on the truck prior to leaving site, placards, and manifests. All waste materials transported off-site will be hauled by licensed truckers in accordance with 6 NYCRR Part 364.

Prior to leaving the site, all vehicles will be inspected to ensure that any soil adhering to tires, undercarriage, or other surfaces is removed. Trucking routes will be evaluated prior to use to determine road conditions, overhead clearance, or weight restrictions. Truck routes will be designed to avoid, to the extent possible, hauling through residential areas and off-site truck idling while waiting to enter the site.

3.3 Excavated Materials Re-Use On-Site

If any material is to be reused on-site, it must be reused in accordance with the provisions of *6 NYCRR Part 360.13 Special requirements for pre-determined beneficial use of fill material*. Based on the provisions of Part 360.13, excavation material can be used as backfill for the excavation as long as it does not exhibit gross contamination (staining or odors). Any excavated material put back in the excavation must be covered with an engineered composite cap. An engineered cap, which is required across the entire site, consists of paved surface, building slab, or a minimum of 2 feet of verified and approved clean soil cap with vegetation. Excavated material may also be placed in other areas of the site with same provisions noted above as long as the area is of similar physical characteristics.

3.4 Materials Disposal Off-Site

Preliminary waste characterization sampling was performed during the Phase II Limited Site Investigation and indicated that the soil contamination in the subsurface was not characteristic of hazardous waste. However, additional waste characterization sampling will be required prior to disposal to meet the individual disposal facility requirements. All hazardous and non-hazardous contaminated soil material and other wastes that are disposed off-site will be documented via manifests and bills of lading and hauled by licensed waste haulers. Prior to any off-site contaminated soil disposal, each disposal facility will provide documentation in writing to the site owner or general contractor charged with soil disposal activities, stating they have reviewed the waste characterization testing for the material they will receive, have approved the material for receipt, and the quantity approved. A copy of the disposal facility permit to receive contaminated material must also be provided.

If excavated soil/fill material that cannot be reused on-site or meets the qualifications for unregulated disposal, i.e., analytical testing indicates the material meets the NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives (UU SCOs), or uncontaminated rock, it may qualify for recycling at a permitted facility. Prior to any off-site transport of the unregulated material, each recycling facility will provide documentation in writing to the site owner or general contractor charged with soil recycling activities, stating they have reviewed the waste characterization testing for the material they will receive, have approved the material for receipt, and the quantity approved. A copy of the recycling facility permit to receive material must also be provided.

Other hazardous materials such as asbestos, lead painted materials, or PCBs (if encountered) may also require regulated disposal in accordance with all local, state, and federal regulations.

3.5 Import of Backfill (Soil) from Off-Site Sources

All imported backfill materials will be characterized via analytical testing at the source facility. Analytical testing must be conducted in accordance with the requirements outlined below in Section 3.6. Each sourcing facility will provide documentation including analytical testing reports to be reviewed by the site owner or general contractor prior to being imported to the site. Additional requirements for material import are described in the following section.

3.6 Source Screening and Testing

All material intended for import to the site will be tested at the source facility by a qualified environmental professional (QEP) for, at a minimum, Target Compound List (TCL) VOCs by EPA Method 8260, SVOCs by EPA Method 8270, pesticides by EPA Method 8081, PCBs by EPA Method 8082, and Target Analyte List (TAL) metals analyses. In addition, testing for Polyfluoroalkyl Substances (PFAS) should be included with the TCL Semi-Volatiles analysis, as per DER-10 "Testing for Imported Soil", Appendix A, page 11 (September 15, 2020). All laboratory analyses will be conducted by a New York State Environmental Laboratory Approved Program (NYS ELAP) certified laboratory. The source facility should have testing data available for every 250 cubic yards of material to be imported. Once data is received it should be compared to NYSDEC 6 NYCRR Part 375 SCOs. Once the source material has been sampled and all data received and compared to Part 375 SCOs, it will be incorporated in to a clean fill report to be submitted to NYC DEP for review and approval. The report will also include a narrative description of source sampling activities and analytical results. No material will be imported to the site without approval of NYC DEP. If the material that arrives at the site exhibits any indications of contamination via visual,

olfactory, or photoionization detector (PID) inspection, the material will be rejected for placement on the site and will be returned to the source facility.

Should recycled concrete aggregate (RCA) be imported for use as fill, it may only be from a facility permitted or registered with NYSDEC. RCA is not suitable as a clean cover material. If another type of material is required for filling, but not placed at the surface during construction, it should be tested as specified above or be from a registered or permitted facility.

3.7 Fluids Management

All liquids including dewatering fluids will be handled and disposed in accordance with local, state, and federal regulations. If it is desired to discharge fluids to the New York City sewer system, approval must be sought and received by NYC DEP. Discharge to the sewer system requires analytical testing and dewatering fluids will require pre-treatment to meet discharge criteria. Pre-treatment generally involves a settling tank where sediment is allowed to settle out of the fluid prior to discharge. The sediment is then disposed of off-site in accordance with the steps outlined in Section 3.4. If fluids do not meet the requirements for discharge to the sewer system, they will be characterized for off-site disposal at a permitted facility.

As with disposal of contaminated soil/fill, all fluids to be transported off-site for disposal will require waste characterization analytical sampling based on the requirements of the receiving facility. The fluid disposal facility will provide documentation in writing that they have reviewed the characterization data and approve the fluid for disposal. A copy of their permit to receive the fluid will also be provided. All contaminated fluid will be transported by a hauler licensed to transport the material.

Discharge of dewatering or other fluids to surface waters (stream or river) is strictly prohibited without a State Pollutant Discharge Elimination System (SPDES) permit issued by NYSDEC.

3.8 Stormwater Pollution Prevention

Since more than 1-acre of land/soil will be disturbed during construction, and there are nearby surface waters that can be directly impacted by uncontrolled runoff, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared.

Erosion and sediment controls measures will be utilized during construction. Measures include silt fences, barriers, and hay bales which will be installed to surround the perimeter of the construction area during all ground disturbance. Erosion and sediment control measures will be inspected and maintained on a weekly basis or after any large precipitation event (> 1" of precipitation). Outfalls will also be regularly inspected to determine if erosion and sediment controls are functioning as protective measures as intended. Inspection results will be maintained in a logbook. Accumulated sediments will be removed from the fencing, barriers, or hay bales and managed in the same manner as excavated soils.

3.9 Odor Control

A number of measures will be employed to prevent or mitigate on and off-site nuisance odors that may occur during construction. Measures that may be implemented include, limiting the size of open excavations, shrouding open excavations with tarps, and utilizing odor suppressing foam on soil with odors. If an area or pocket of soil is uncovered that exhibits evidence of gross contamination including odors and the nuisance odors cannot be eliminated, direct loading of soil onto trucks for off-site disposal without stockpiling should be implemented. If nuisance odors persist or public complaints are received, work should be halted until the appropriate mitigation or elimination measures can be implemented.

3.10 Dust Control

Dust particulates may be generated during site demolition of the existing building, removal of existing pavement, and during soil excavations. In order to prevent prolonged dust exposures on and off-site above background levels, several mitigation measures will be utilized.

- Dedicated water spraying equipment for roads, excavation, and stockpile areas;
- Soil stockpile covers will be properly weighted so that they stay in place during non-working hours;
- Maintain diligent practices during dry and high wind conditions;

- Construction entrances and exits will be stabilized and dedicated workers will inspect trucks coming on and off-site to remove loose soil from truck tires, truck undercarriage, and truck surfaces to avoid tracking it off-site or allowing it to become aerosolized.

If for any reason the measures noted above do not prevent dust emissions, work will be halted to assess practices and develop corrective actions.

3.11 Community Air Monitoring Plan (CAMP)

Real-time air monitoring for VOCs and particulate levels will be conducted along the perimeter of the exclusion zone. Monitoring will be conducted during all ground intrusive activities and during all soil/fill or other regulated material handling. All readings will be recorded in a logbook and available for review by NYC DEP. Exceedances of action levels that occur during the workday will be corrected as they occur and recorded in a logbook. This CAMP has been prepared in accordance with Appendix 1A New York State Department of Health Generic Community Air Monitoring Plan contained within NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, May 3, 2010.

3.11.1 VOC Monitoring, Response Levels, and Actions

Monitoring for VOCs will be conducted at the downwind perimeter of the work area(s) during intrusive work. Upwind areas will be monitoring at the start of each workday and periodically during the workday to establish background levels. Monitoring equipment will be calibrated at the start of each day and be capable of data logging and calculating 15-minute time weighted average concentrations. The 15-minute average concentrations will be compared to the following action levels:

Contaminant of Concern	Action Level	Response Action
VOCs	>5 ppm	Work will be temporarily halted and monitoring continued until the organic vapor level decreases below background levels. Work activities may then resume
	>5 ppm over background but less than 25 ppm	Work will be halted and the source of the vapors identified. Corrective actions will be employed to abate the emissions will monitoring continues. Work can resume once the organic vapor level 200ft downwind of the exclusion zone or half the distance to the nearest receptor (but in no case less than 20ft) is below 5 ppm over background for the 15-min time-weighted average
	Exceeds 25 ppm	Work activities will be shut down and will not resume until the source of the emissions is abated and readings are less than 25 ppm over background levels.
Note: The ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone for the 15-minute average, in parts per million (ppm).		

3.11.2 Particulate Monitoring, Response Levels, and Actions

Monitoring for particulates will be conducted at the upwind and downwind work area perimeter. The particulate meters will be capable of real-time data logging and able to detect particulates at 10 micrometers in size. An audible or visual alarm should also be fitted to the equipment, so any exceedances of action levels is known immediately. Visual assessments of particulates in the air will also be monitoring throughout the workday. Particulate action levels and response actions are shown below:

Contaminant of Concern	Action Level	Response Action
Particulates	Between 100 mcg/m ³ and 150 mcg/m ³	Dust suppression activities will be employed. Work will continue as long as levels are not 150 mcg/m ³ above the upwind level and no visible dust is migrating out of the work area(s).
	Exceeds 150 mcg/m ³	Work will be halted and work methods will be re-evaluated to determine the proper mitigation techniques. Work will resume when mitigation or elimination measures reduce the particulate concentration to within 150 mcg/m ³ of the upwind concentration and dust is not visibly migrating from the work area.

3.12 Petroleum Storage Tank Closure

No known petroleum storage tanks were identified within the Project Area however, a REC identified in the September 2019 Phase I indicated that hydraulic fluid is used in an elevator motor. Depending on the design of the elevator, a hydraulic fluid reservoir may be present in the vicinity of the elevator. Should a tank be encountered, it should be managed in accordance with the steps identified in this section.

If any tanks are located during construction, (including piping and apertures), they will be cleaned, removed, and disposed of in accordance with all applicable local, state, and federal regulatory requirements. If encountered, tanks will be decommissioned in accordance with *NYSDEC Division of Spills and Responses Memorandum regarding permanent closure of Petroleum Storage Tanks (January 1987, modified December 2003)*. Additionally, to comply with 6 NYCRR Part 612.2, the existing State Petroleum Bulk Storage listing for the site should be updated to reflect the discovery and removal of any known or previously unknown tanks.

Tank removal activities including any associated petroleum contaminated soil removal must be documented in a Spill Closure Report and submitted to NYSDEC. The City of New York also requires gasoline tanks be reported to the New York City Fire Department. Typical tank removal procedures include the following:

- Open the fill cap or vent pipe and measure for the presence of product (oils). If present collect a sample to determine the tank contents. Depending on the facility chosen to receive the product in the tank, laboratory analysis may be required.
- Deliberately excavate around the tank to avoid puncturing it. Remove the contents of the tank; typically, via vacuum truck. Document disposal of tank contents in accordance with all local, state, or federal regulations.

- As the tank is uncovered, note the condition of the tank including the amount of corrosion and any holes or punctures.
- During these activities, air monitoring of the worker breathing zone should be conducted for the presence of toxic, flammable, or oxygen depletion. Monitoring equipment for these activities include PID, combustible gas indicator, and an oxygen meter.
- Inert any flammable vapors within the tank.
- Clean the tank of residual product/sludge.
- If tank entry is required for any personnel, work will be conducted in accordance with OSHA confined space requirements.
- Remove the tank and associate piping, clean the equipment, and document disposal of the tank equipment in accordance with all local, state, or federal regulations.
- If a spill of tank contents is observed, it will be reported to the NYSDEC Spill Hotline (800-457-7362).
- Once the tank is removed, observe the vicinity of the area for evidence of a spill in accordance with NYSDEC CP 51 Soil Cleanup Guidance.
- If soil contamination is observed, excavate and segregate the contaminated soil until field screening indicates that all grossly contaminated material has been removed.
- Collect end-point soil samples along the sidewall and floor of the excavation in accordance with the NYSDEC CP 51 Soil Cleanup Guidance.
- Photo document all procedures.
- A license tank installation and removal contractor must be present for tank removal activities.
- Documentation of all removal activities including photos, analytical results, disposal manifests, disposal facilities and their permits will be maintained and compiled for inclusion in a Tank Closure Report to be submitted to NYSDEC.

3.13 Hazardous Materials Mitigation Air Monitoring

The use of asbestos containing building materials was phased out in the United States during the 1980's. The pavilion at South Battery Park was constructed in the 1990's, making it unlikely that large amounts of Asbestos Containing Materials (ACM) were utilized during construction. However, pursuant to NYCDEP Asbestos Control Program Requirements, AECOM completed a pre-demolition NYCDEP ACP-5 Form (Asbestos Assessment Report) (Appendix C), which will be submitted with the demolition permit package for the building. This form, which is signed by a NYCDEP Certified Asbestos investigator, is needed to demonstrate to NYCDEP the building is either free of asbestos or that asbestos may present and either protected or abated prior to or during demolition. The Asbestos Assessment Report determined that there may be small area of asbestos containing material (less than 25 linear feet) of assumed asbestos containing pipe insulation in an elevator shaft that was inaccessible at the time of inspection. As noted on the ACP-5 Form, this material can be tested prior to demolition once access is available, and abated if necessary based on the analytical results. If abatement is needed, all required abatement and monitoring will be conducted by a New York State Department of Labor Licensed Contractor and Project Monitor in accordance with 12 NYCRR Part 56.

Additionally, based on the age of the building it is not likely that lead based paints, which were phased out in the 1970's, will be a concern during demolition activity. Since this is a commercial building a lead paint inspection is not required by NYCDEP. However, if the presence of lead based paint is suspected or encountered, it will be managed and monitored in accordance with NYCDEP, USEPA and OSHA rules and regulations regarding waste disposal and worker protection.

4 Remedial Measures

4.1 Containment Techniques

Construction of the SBPCR Project will also establish a cap to prevent exposure to the residual contamination. The cap will include the following:

- The structures associated with the Museum of Jewish Heritage and other building slabs and foundations, existing pavement, etc. will remain and serve as a protective cap preventing contact with residual contaminated soil/fill;
- To meet projected DFEs for coastal surge, Wagner Park will be elevated 10 to 12 feet and the buried floodwall would be constructed beneath the raised park. The top two feet of soil will be clean fill;
- Areas of pedestrian and bike pathways will be paved impervious surfaces that also serve as a barrier between residual contamination and the public.

Once construction has been completed, the activities associated with removal/disposal and import of soil/fill material will be documented in a Remedial Closure Report (RCR). The report will be certified by a New York State Licensed Professional Engineer and submitted to NYC DEP.

4.2 Contingency Plan

A contingency plan has been developed to address previously unknown structures or contaminated media (soil, water, or impacted rock and concrete) during construction. During intrusive site activities, if a contamination source is discovered, it will be promptly addressed in accordance with this plan. Any petroleum spills will be reported to the NYS Spill Hotline. All findings will be documented in daily reports. Any unknown contamination sources found during construction will be investigated, including but not limited to, sampling of the media in accordance with NYSDEC CP 51 Soil Cleanup Guidance and in general accordance with NYSDEC Technical Guidance for Site Investigation and Remediation (DER 10).

5 Remedial Closure Report (RCR)

A RCR certified by a NYS-licensed PE will be prepared and submitted to NYC DEP at the conclusion of construction/remedial action defined in this RAP. The RCR will document that construction/remedial work was conducted in compliance with this plan. The RCR will include:

- All regulatory correspondence with agencies including, but not limited to NYCDEP or NYSDEC;
- Photographic documentation and daily reports;
- A description of any deviations from this plan (if they occur);
- A tabular summary of any end-point sampling results (if they occur);
- All analytical data reports for either investigation or waste characterization purposes;
- Documentation of all soil/fill or other hazardous materials disposal; including testing data, correspondence with disposal facilities, copies of any regulated material disposal manifests, quantities of material disposed, and copies of any regulated material disposal facility permits;
- Documentation of any soil/fill material imported to the site for use as fill or embankment material, including analytical testing, sieve testing, source facility(s), and quantities imported;
- As-built drawings for the site cover.

Appendix A Document copies

A. Previous Due Diligence and Investigation Reports

Appendix B Document copies

B. Draft Construction Health and Safety Plan (CHASP)

Appendix C Document Copies

C. Asbestos Abatement Report



NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
Asbestos Control Program
59-17 Junction Boulevard, 8th Floor, Flushing, NY 11373
ASBESTOS ASSESSMENT REPORT



1. NYC DOB Job # (if applicable) M00613188 **Control Number: 11017140**

2. Premise No. 20 Street Name Battery Place Borough Manhattan Zip 10004

3. AKA Battery Park Pavilion Type of Facility Other BIN 1084397 Block 00016 Lot 0003

4. Building Owner Battery Park City Authority Address 20 Battery Place

5. City New York State NY Zip 10004 Contact Person Gwen Dawson

6. Tel. # (212) 417-4304 Fax # _____ Email gwen.dawson@bpca.ny.gov

7. Work Type Other (Full Demolition)

Description of the Entire Scope of Work

Demolish and remove of the existing building in entirety, including but not limited to all structure, electrical, plumbing, and mechanical features and finishes, and all other contents or attachments.


8. I, ANDREW AU, have conducted an asbestos investigation on
Name of Certified Asbestos Investigator
07/06/2022 7:00AM-1:00PM, 07/22/2022 8:30AM-12:00PM in accordance
Date(s)
with Sections 1-16 and 1-28 of the NYC DEP Asbestos Control Program Rules and declare that at said facility address, the
- ☐ a. the premises or the portion(s) of the premises, included in the scope of renovations was/were determined that there was no asbestos-containing materials (ACM) present
- ☒ b. premise (or portions thereof) affected by the work contains 10 square feet or less or 25 linear feet or less of ACM. Specify locations in section 9: Note: This material must be abated as a minor project in accordance with relevant provisions of the DEP Asbestos Rules.
- ☐ c. asbestos is present and will not be disturbed during construction activity. Specify the quantity and area where asbestos is present. Specify amount: _____ sq. ft _____ linear ft.
- ☐ d. entire building is free of asbestos containing material (ACM).

9. RESULTS OF ASBESTOS BUILDING SURVEY:

Floor	Section of Floor(s) Surveyed	Material Assumed to Contain ACM and/or Sampled	Number of Samples Analyzed	Asbestos Present	Assumed ACM	Square Feet	Linear Feet	Abated	Scope of Work Applied
Outside Space	South Building - Exterior	White Door Caulk (HA-26)	2	No					b

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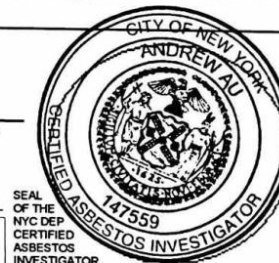
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ANDREW AU  8/29/2022 147559 6/8/2023
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Is it a Build-It-Back project? ☐ Yes, App ID # _____ ☒ No



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Outside Space	South Building - Exterior	Brick Mortar (HA-27)	2	No					b
Outside Space	South Building - Exterior	Dark Gray Vertical Expansion Joint Caulk (HA-28)	2	No					b
Outside Space	South Building - Exterior	Dark Gray Expansion Joint Caulk to Brick Arch (HA-29)	2	No					b
Outside Space	South Building - Exterior	Dark Gray Expansion Joint Caulk to Building Base (HA-30)	2	No					b
Outside Space	South Building - Exterior	White Caulk to Stairs (HA-31)	2	No					b
Outside Space	South Building - Exterior	Dark Gray Caulk to Stair Railing (HA-32)	2	No					b
Outside Space	South Building - Exterior	Dark Gray Floor Caulk (HA-33)	2	No					b
Outside Space	South Building - Exterior	Stone Mortar (HA-34)	3	No					b
Outside Space	South Building - Exterior	Gray Caulk to Light Posts (HA-35)	2	No					b
Outside Space	South Building - Exterior	Gray Drain Caulk (HA-36)	2	No					b
Outside Space	South Building - Exterior	Door Caulking (HA-56)	2	No					b
Outside Space	South Building - Exterior	Light Panel Caulking (HA-57)	2	No					b
Outside Space	North Building - Exterior	Brick Mortar (HA-27)	1	No					b
Outside Space	North Building - Exterior	Dark Gray Vertical Expansion Joint Caulk (HA-28)	1	No					b
Outside Space	North Building - Exterior	Dark Gray Expansion Joint Caulk to Brick Arch (HA-29)	1	No					b
Outside Space	North Building - Exterior	Dark Gray Expansion Joint Caulk to Building Base (HA-30)	1	No					b
Outside Space	North Building - Exterior	White Caulk to Stairs (HA-31)	1	No					b

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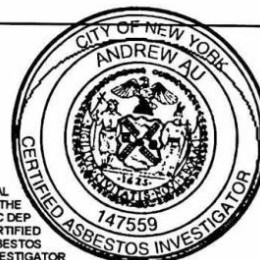
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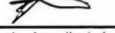
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Asbestos Control Program
59-17 Junction Boulevard, 8th Floor, Flushing, NY 11373
ASBESTOS ASSESSMENT REPORT



Outside Space	North Building - Exterior	Dark Gray Caulk to Stair Railing (HA-32)	1	No						b
Outside Space	North Building - Exterior	Gray Caulk to Light Posts (HA-35)	1	No						b
Outside Space	North Building - Exterior	Gray Drain Caulk (HA-36)	1	No						b
Outside Space	North Building - Exterior	Gray Caulk to Elevator Door (HA-37)	2	No						b
Outside Space	North Building - Exterior	Gray Floor Caulk (HA-38)	2	No						b
Outside Space	North Building - Exterior	Window Caulking (HA-58)	3	No						b
Roof	South Building - Roof	Stone Mortar (HA-44)	1	No						b
Roof	South Building - Roof	Gray Roof Membrane (HA-51)	2	No						b
Roof	South Building - Roof	Cementitious Roof Base (HA-52)	2	No						b
Roof	South Building - Roof	Gray Roof Flashing (HA-53)	2	No						b
Roof	South Building - Roof	Vent Tar (HA-54)	2	No						b
Roof	South Building - Roof	Vent Caulking (HA-55)	2	No						b
Roof	North Building - Roof	Stone Mortar (HA-44)	2	No						b
Roof	North Building - Roof	Black Sealant (HA-45)	2	No						b
Roof	North Building - Roof	Gray Sealant (HA-46)	2	No						b
Roof	North Building - Roof	Gray Roofing Membrane (HA-47)	2	No						b
Roof	North Building - Roof	Cementitious Roof Base (HA-48)	2	No						b
Roof	North Building - Roof	Gray Roof Flashing (HA-49)	2	No						b
Roof	North Building - Roof	Gray Equipment Flashing (HA-50)	2	No						b
Ground Floor	North Building - Interior	Ceramic Wall Tile Grout (HA-39)	2	No						b

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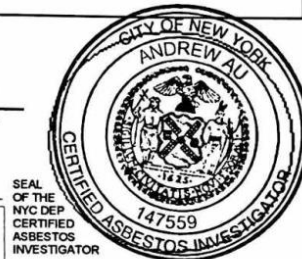
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Ground Floor	North Building - Interior	Ceramic Wall Tile Setting Bed (HA-40)	2	No					b
Ground Floor	North Building - Interior	Ceramic Floor Tile Grout (HA-41)	2	No					b
Ground Floor	North Building - Interior	Ceramic Floor Tile Setting Bed (HA-42)	2	No					b
Ground Floor	North Building - Interior	Textured White Ceiling (HA-43)	3	No					b
Ground Floor	North Building - Interior	CMU Mortar (HA-21)	1	No					b
Ground Floor	North Building - Interior	Brown Duct Sealant (HA-59)	2	No					b
Ground Floor	North Building - Interior	Black Tar on CMU Block (HA-60)	2	No					b
Ground Floor	North Building - Interior	Red Duct Sealant (HA-61)	2	No					b
Ground Floor	North Building - Interior	White Door Caulk (HA-62)	2	No					b
Ground Floor	North Building - Interior	All Service Jacket to Fiberglass Insulated Piping (HA-63)	3	No					b
Attic	South Building - Interior	Duct Vibration Dampener (HA-01)	3	No					b
Attic	South Building - Interior	Gray Duct Sealant (HA-02)	3	No					b
Attic	South Building - Interior	Aluminum Wrap to Fiberglass Pipe Insulation (HA-03)	3	No					b
Attic	South Building - Interior	White Duct Insulation (HA-04)	3	No					b
Ground Floor	South Building - Interior	Gypsum Wall Board (HA-05)	2	No					b
Ground Floor	South Building - Interior	Joint Compound (HA-06)	3	No					b
Ground Floor	South Building - Interior	Leveling Compound (HA-07)	3	No					b
Ground Floor	South Building - Interior	Ceramic Floor Tile Setting Bed (HA-08)	2	No					b

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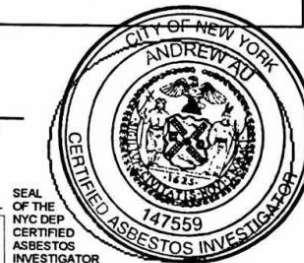
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Ground Floor	South Building - Interior	Ceramic Floor Tile Grout (HA-09)	2	No					b
Ground Floor	South Building - Interior	Ceramic Baseboard Caulk (HA-10)	2	No					b
Ground Floor	South Building - Interior	White Caulk to Electrical Outlet (HA-11)	2	No					b
Ground Floor	South Building - Interior	Ceramic Floor Tile Grout (HA-12)	2	No					b
Ground Floor	South Building - Interior	Ceramic Floor Tile Setting Bed (HA-13)	2	No					b
Ground Floor	South Building - Interior	Gray Cementitious Duct Sealant (HA-14)	3	No					b
Ground Floor	South Building - Interior	All-Service Jacket to Fiberglass Insulated Piping (HA-15)	3	No					b
Ground Floor	South Building - Interior	White Ceiling Tiles (HA-16)	2	No					b
Ground Floor	South Building - Interior	Widow Glazing (HA-17)	2	No					b
Ground Floor	South Building - Interior	Cementitious Wall Coating (HA-18)	3	No					b
Ground Floor	South Building - Interior	Plastic Wall Panel Glue (HA-19)	2	No					b
Ground Floor	South Building - Interior	Leveling Compound (HA-20)	3	No					b
Ground Floor	South Building - Interior	CMU Mortar (HA-21)	2	No					b
Ground Floor	South Building - Interior	Ceramic Wall Tile Adhesive (HA-22)	2	No					b
Ground Floor	South Building - Interior	Ceramic Wall Tile Grout (HA-23)	2	No					b
Ground Floor	South Building - Interior	Ceramic Floor Tile Setting Bed (HA-24)	2	No					b
Ground Floor	South Building - Interior	Ceramic Floor Tile Grout (HA-25)	2	No					b
Underground	North & South Buildings	Assumed Pipe Insulation (Crawl Spaces)	0	Yes	Yes		10	No	b

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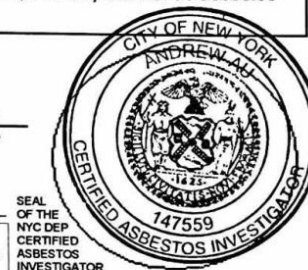
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ASBESTOS ASSESSMENT REPORT



10. ANALYTICAL LABORATORY:

NAME	ELAP # (NYS DOH CERTIFICATION)	DATE(S) SAMPLES ANALYZED
EMSL Analytical, Inc	11506	7/10/2022
EMSL Analytical, Inc	11506	7/11/2022
EMSL Analytical, Inc	11506	7/12/2022
EMSL Analytical, Inc	11506	8/2/2022

11. NYS DOL Asbestos Handling license # 61642 **Company Name** AECOM USA, Inc.

12. Comment

Asbestos-containing pipe insulation assumed to exist in underground crawl spaces and should be further evaluated once made accessible for inspection.

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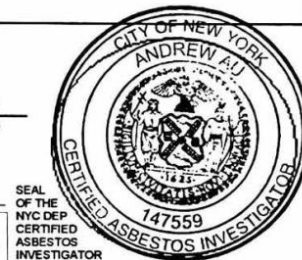
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